

GEORGIA PACIFIC CORPORATION
SIGURD, UTAH 84657
PHONE 896-5406
SUBMITTED BY J.B. CARTER
ON ~~JANUARY~~ FEBRUARY 26 1981 TO THE

MINING APPLICATION
NO. _____
Date _____

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
RICHFIELD DISTRICT OFFICE
150 East 900 North
Richfield, Utah 84701

RECEIVED

MAR 03 1981 FEB 26 1981

MINING AND RECLAMATION PLAN

(Other forms may be used in lieu of MR 2, provided they contain the same information)

RICHFIELD			
	Initial	Act	Info
DM			
Asst DM			
Resources			
Operations			
EPS			

Mining			
Admin			
Reclamation			
Training			
Area			

1. Name of Applicant or Company - Georgia-Pacific Corporation
2. Proposed Type of Operation - Continuation of gypsum quarrying
3. (a) Prior Land Use(s) - None, except for occasional grazing by sheep and wildlife in the limited areas of higher density vegetation.
(b) Current Land Use(s) - Ditto - plus gypsum quarrying operations.
(c) Possible or Prospective Future Land Use(s) - As in 3(a) above.
4. What vegetation exists on the land proposed to be affected - Sparse growth of trees, shrubs and grasses characteristic of the arid climate and the rugged and rocky terrain.
Types and Estimated Percent Cover or Density - The percent of total vegetative cover is estimated to be less than 5% and is comprised primarily of cedar, pine, sagebrush, saltbush, yellowbrush, bitter brush and Indian rice grass.
5. What is the range pH of soil before mining? 8 pH.
Name of Person or Agency and method of determining pH - Soil Conservation Service - Colorimetric method.
6. Site Elevation above sea level - 5600 ft. +
7. In case of coal, oil shale, and bituminous sandstone: Principal seam(s) and thickness(es) Not applicable
8. Estimated duration of mining operations - 20 years
9. Has overburden waste or rejected materials been classified as acid or alkali producing? - No.
Does the above material being moved have any other characteristics affecting revegetation? No.
10. Will any underground workings or aquifers be encountered? No.
Is there an active discharge of water from abandoned deep mines on or crossing the land affected? No.

11. Topography, Geology, Rock and Soil Characteristics

As is evident in the various drawing exhibits, much of the affected area shows considerable relief, the gypsum generally outcropping on the top or otherwise lying on one flank of hogbacks, ridges and hills.

The gypsum occurs in the middle part of the Arapien shale formation of Jurassic age. The rock strata are complexly faulted and folded in "en echelon" folds that trend to the north-northeast.

Country rock in the affected area is mostly comprised of calcareous grey and red siltstones and shales. Surficial materials, other than gypsum, are mostly shale and siltstone fragments, clay and gypsite, the weathered products of the rock strata.

12. Vegetation and Re-vegetation

Because of the nature of this surficial material, the rugged topography, and the semi-arid climate (average annual precipitation of 8-1/2 inches), the affected land is mostly barren with but a sparse growth of vegetation.

In areas where surficial materials were disturbed through the years by previous gypsum quarry site and access road preparation work, there now appears to be more native vegetation than previously existed. This is believed to be due to the comminution and degradation of the fragmented shales and mudstones by the tractor-dozers and the resultant increase in the clay-like content of the surface material.

To promote more such growth in areas of future operations, we plan to do more re-grading of such disturbed materials on the flatter terrain and more gentle slopes where tractor-dozers can be safely used and to work cooperatively with the local Soil Conservation Service in an effort to accelerate vegetative growth, if possible, by reseeding.

13. Mining Methods and Sequence

As the gypsum deposits outcrop at the top or along the flank of ridges and hills, quarrying is started at the top by mining a "bench" (having a face height of not more than 20 feet) along the width and length of the deposit. Successive 20 foot benches are similarly quarried until excessive anhydrite or other deleterious minerals are encountered that render the rock unusable or until the quarry "bottoms" in clay, siltstone or shale, as sometimes occurs.

To develop such a quarry, a haul road is first constructed to the deposit, from which a temporary "drill road" is bulldozed to the top of the gypsum. Vertical blastholes, not exceeding 20 feet in depth, are drilled from the top of the deposit and blasted. The broken rock is then loaded into the quarry trucks by a front end loader and hauled to the plant site for stockpiling and subsequent processing.

All such mining operations, including road construction and site preparation will continue to be conducted in accordance with applicable codes

and regulations, with particular emphasis on the safety of personnel and the proper maintenance of the equipment.

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Access roads are constructed where necessary by a tractor-dozzer. In the flatter terrain of the area, most roads were constructed years ago as mining claim assessment work or as access roads to former quarry sites. As and when it is necessary to haul over these roads, some regrading and improvement will be required in certain areas, as indicated on the pertinent exhibits. In and near the gypsum areas, that are characterized by more topographic relief, new access roads will be constructed (in many places along pre-existing "jeep roads") up valleys and hillsides to the higher ground levels where quarrying is to be done.

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16. Removal and Stockpiling of Surficial Materials

This will be done as mentioned in Item 13, above.

17. Placement or Containment of Disturbed Materials

Where practical, all disturbed materials will be retained on level or gently sloping terrain where they can be re-graded and seeded. When operating along the peaks of ridges or on the flank of hogback type hills, (where the quarry floor that is to be worked downward in descending horizontal benches cannot be encumbered with surficial materials), such materials are pushed onto the almost barren slopes of the hillsides. In such areas, gypsum "fly-rock" from blasting and "spillage" of gypsum rock over the hillside edge of the quarry benches sometimes results in the deposition of

gypsum fragments and boulders on hillsides that are too steep to permit reclaim of such material by mobile equipment. In the past, where such gypsum material could be reached at or near the foot of slopes by dozing a temporary road to the foothill area, it was reclaimed to maximize recovery of the rock. Although presently indeterminate, there may prove to be some locations where such foothill recovery of gypsum rock may be required in future.

No known acid, alkali-producing or toxic materials are present in the area to be affected.

18. Stabilization of Disturbed Materials

All grading of disturbed materials will be done in a manner that will provide stability prior to any seeding of the area.

GRADING AND REGRADING

19. (a) Typical Cross-Section of Regrading

Because of the greatly varying physiography of the area to be affected, and because of the varying modes of occurrence of the gypsum deposits, there is no typical cross-section of regrading. Additionally it is generally not known, when mining of a deposit is initiated, how many benches can be mined before encountering excessive impurities or country rock.

(b) Spreading of Surficial Materials

Disturbed surficial material on the more gentle slopes and flat terrain will be regraded by a tractor-dozzer. The removal of such material will be kept to a minimum and will be spread in thickness of one foot or more.

(c) No soil treatment is contemplated but if experience proves that re-vegetation is materially aided by the use of fertilizer, it will be used.

(d) Because of the minor amount of precipitation in the area, no particular drainage control has been required through the years in our Sevier County gypsum quarry areas. The quarry areas show much relief before quarrying is done and the amount of run off and drainage patterns are not materially changed by the quarry operations.

(e) Dump and road fill slopes will not exceed 50°. Elsewhere an effort will be made to not exceed the maximum natural slopes of the original or adjacent terrain.

TESTING

20. (a) Stability of Reclamation Fill Material

The stability of the reclamation fill material is known from many years of quarrying in the area.

(b) Soil Testing

It is planned to work cooperatively with the Soil Conservation Service in an effort to determine the practicality and optimum methods of revegetating those affected areas where sufficient clay occurs with the rocky surface materials to support some vegetation. The pH and other characteristics of the surficial mix will be checked as part of any such program.

No revegetation has been attempted to date. In consideration of the climactic, topographic, and soil conditions in the areas to be affected, it is not certain that revegetation will prove advantageous or warranted, but an on-going program of re-vegetation will be attempted and, if successful, continued as an integral part of the operation.

(c) Soil Treatment

As indicated in 19(c), above, soil treatment will be used if required and we would anticipate that it would be such as recommended by the Soil Conservation Service and found beneficial.

(d) Surface Preparation of Areas Intended to Support Vegetation

Such areas will be scarified, if necessary, and properly graded prior to revegetation.

REVEGETATION

21. (a) Revegetation will be done by conventional or rangeland drilling.

(b) It is not expected that mulch will be used.

(c) Revegetation Plan and Schedule

As can be seen from the Exhibits, affected areas will be facing all directions.

Seeding will be done during the Fall months.

The species of seeds and the rates of application will depend upon the results achieved. It is expected that initial reseeding programs will include test plots of the following plantings:

<u>Species</u>	<u>Rate/Acre</u>
Four Wing Salt Bush	6 lbs.
Siberian Wheat Grass	8 lbs.
Indian Rice (if available)	10 lbs.
Bitter Brush	4 lbs.

Regrading and revegetation will be done concurrently with quarry operations and will be completed within one year after completion of quarrying of a deposit.

- (d) Little grazing is done in the area. If it presents any problems, attempts will be made to minimize it as long as necessary.
- (e) No irrigation will be used.
- (f) If revegetation proves practical, reseeding will be done as necessary to achieve proper results.

I, the undersigned Operator, hereby submit this to be my Reclamation and Mining Plan for the area shown on the attached map. I further understand that the operation will be conducted in accordance with the Mined Land Reclamation Act of 1975, and all rules and regulations currently in effect thereunder.

Signed E. J. Cole : Operator
E. J. Cole, Chief Mining Engineer

Date June 22, 1977

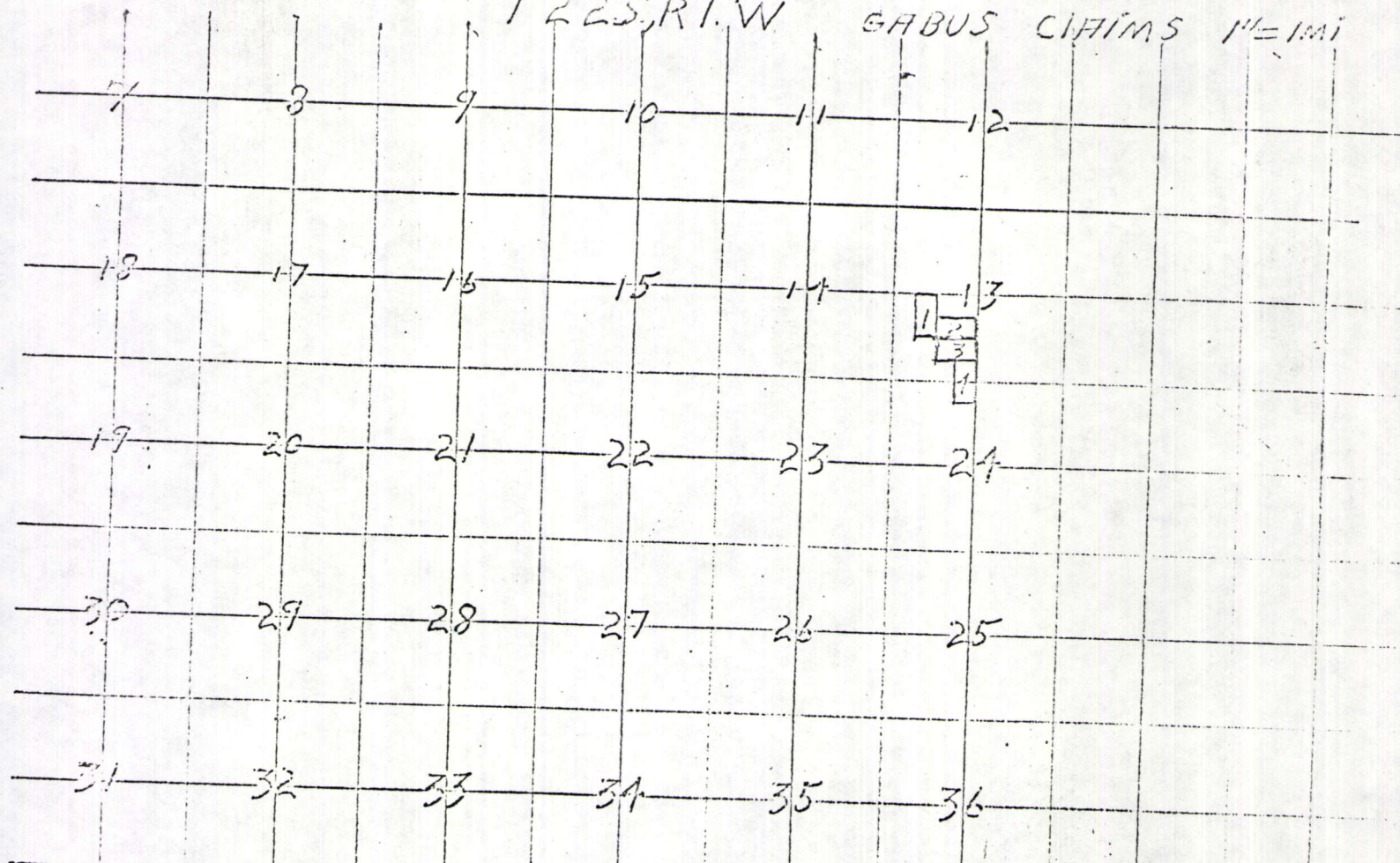
Taken, subscribed and sworn to before me the undersigned authority in my said county, this 22nd day of June, 19 77.

Notary Public Phyllis M. M. M.

My Commission Expires: 02-22-80

T22S, R1. W

GABUS CLAIMS 1"=1MI



GABUS CLAIMS

NO	BOOK	PAGE
1	"	649
2	"	649
3	"	650
4	"	650

BY J. R. CARTER

T.23 S. R1W

WESTERN CLAIMS

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WESTERN CLAIMS

WESTERN CLAIMS

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KINGS MEADOW CLAIMS

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WESTERN CLAIMS

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This will be done as mentioned in Item 13, above.

17. Placement or Containment of Disturbed Materials

Where practical, all disturbed materials will be retained on level or gently sloping terrain where they can be re-graded and seeded. When operating along the peaks of ridges or on the flank of hogback type hills, (where the quarry floor that is to be worked downward in descending horizontal benches cannot be encumbered with surficial materials), such materials are pushed onto the almost barren slopes of the hillsides. In such areas, gypsum "fly-rock" from blasting and "spillage" of gypsum rock over the hillside edge of the quarry benches sometimes results in the deposition of

gypsum fragments and boulders on hillsides that are too steep to permit reclaim of such material by mobile equipment. In the past, where such gypsum material could be reached at or near the foot of slopes by dozing a temporary road to the foothill area, it was reclaimed to maximize recovery of the rock. Although presently indeterminate, there may prove to be some locations where such foothill recovery of gypsum rock may be required in future.

No known acid, alkali-producing or toxic materials are present in the area to be affected.

18. Stabilization of Disturbed Materials

All grading of disturbed materials will be done in a manner that will provide stability prior to any seeding of the area.

GRADING AND REGRADING

19. (a) Typical Cross-Section of Regrading

Because of the greatly varying physiography of the area to be affected, and because of the varying modes of occurrence of the gypsum deposits, there is no typical cross-section of regrading. Additionally it is generally not known, when mining of a deposit is initiated, how many benches can be mined before encountering excessive impurities or country rock.

(b) Spreading of Surficial Materials

Disturbed surficial material on the more gentle slopes and flat terrain will be regraded by a tractor-dozzer. The removal of such material will be kept to a minimum and will be spread in thickness of one foot or more.

(c) No soil treatment is contemplated but if experience proves that re-vegetation is materially aided by the use of fertilizer, it will be used.

(d) Because of the minor amount of precipitation in the area, no particular drainage control has been required through the years in our Sevier County gypsum quarry areas. The quarry areas show much relief before quarrying is done and the amount of run off and drainage patterns are not materially changed by the quarry operations.

(e) Dump and road fill slopes will not exceed 50°. Elsewhere an effort will be made to not exceed the maximum natural slopes of the original or adjacent terrain.

TESTING

20. (a) Stability of Reclamation Fill Material

The stability of the reclamation fill material is known from many years of quarrying in the area.

(b) Soil Testing

It is planned to work cooperatively with the Soil Conservation Service in an effort to determine the practicality and optimum methods of revegetating those affected areas where sufficient clay occurs with the rocky surface materials to support some vegetation. The pH and other characteristics of the surficial mix will be checked as part of any such program.

No revegetation has been attempted to date. In consideration of the climactic, topographic, and soil conditions in the areas to be affected, it is not certain that revegetation will prove advantageous or warranted, but an on-going program of re-vegetation will be attempted and, if successful, continued as an integral part of the operation.

(c) Soil Treatment

As indicated in 19(c), above, soil treatment will be used if required and we would anticipate that it would be such as recommended by the Soil Conservation Service and found beneficial.

(d) Surface Preparation of Areas Intended to Support Vegetation

Such areas will be scarified, if necessary, and properly graded prior to revegetation.

REVEGETATION

21. (a) Revegetation will be done by conventional or rangeland drilling.

(b) It is not expected that mulch will be used.

(c) Revegetation Plan and Schedule

As can be seen from the Exhibits, affected areas will be facing all directions.

Seeding will be done during the Fall months.

The species of seeds and the rates of application will depend upon the results achieved. It is expected that initial reseeding programs will include test plots of the following plantings:

<u>Species</u>	<u>Rate/Acre</u>
Four Wing Salt Bush	6 lbs.
Siberian Wheat Grass	8 lbs.
Indian Rice (if available)	10 lbs.
Bitter Brush	4 lbs.

Regrading and revegetation will be done concurrently with quarry operations and will be completed within one year after completion of quarrying of a deposit.

- (d) Little grazing is done in the area. If it presents any problems, attempts will be made to minimize it as long as necessary.
- (e) No irrigation will be used.
- (f) If revegetation proves practical, reseeding will be done as necessary to achieve proper results.

I, the undersigned Operator, hereby submit this to be my Reclamation and Mining Plan for the area shown on the attached map. I further understand that the operation will be conducted in accordance with the Mined Land Reclamation Act of 1975, and all rules and regulations currently in effect thereunder.

Signed E. J. Cole Operator
E. J. Cole, Chief Mining Engineer

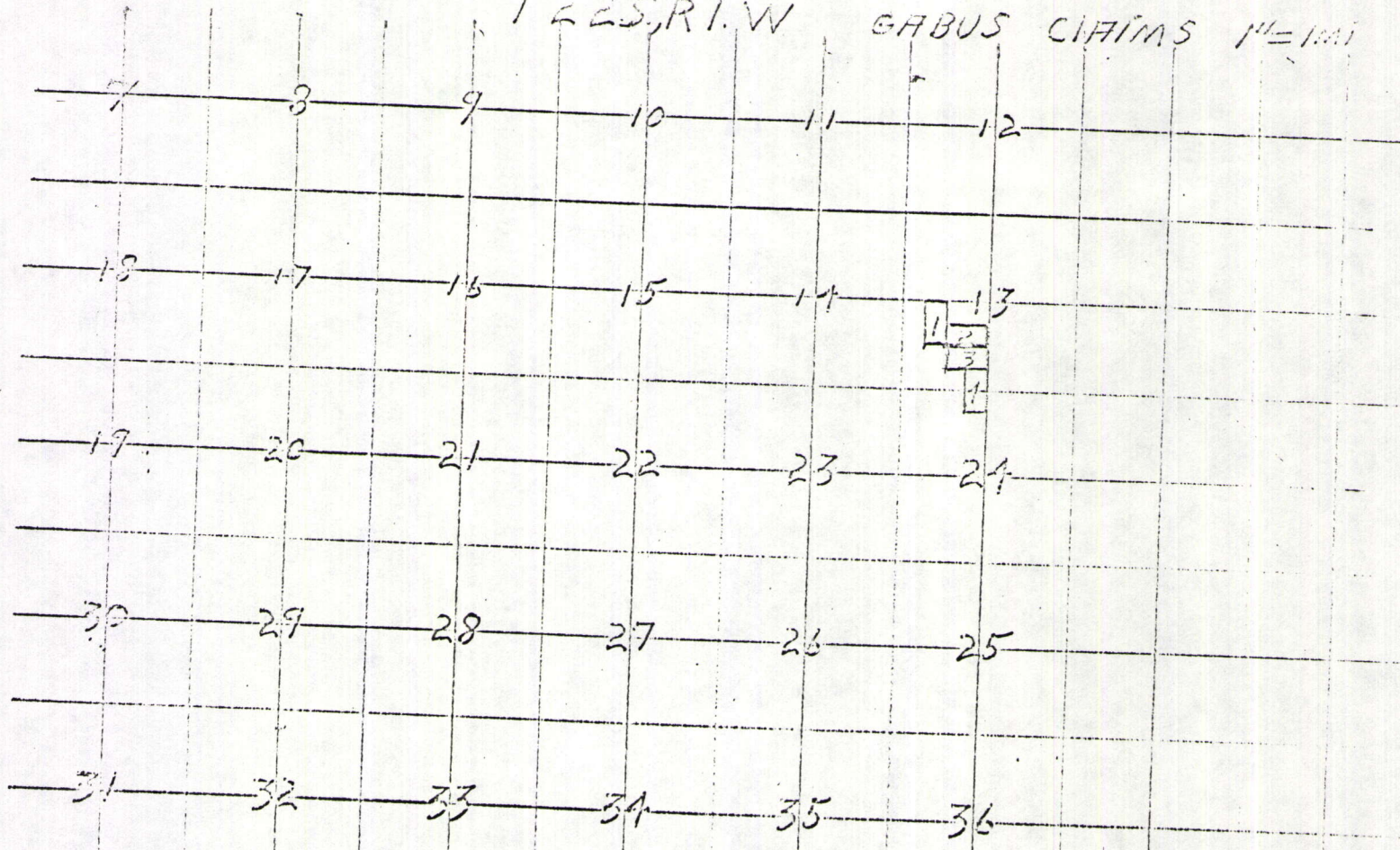
Date June 22, 1977

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 22nd day of June, 19 77.

Notary Public Christian M. Williams

My Commission Expires: 02-22-80

T.E.S., R.I.W. GABUS CLAIMS 1"=1 MI



GABUS CLAIMS

NO	BOOK	PAGE
1	"	649
2	"	649
3	"	650
4	"	650

BY J.R. CARTER

T.23 S. R1W

WESTERN CLAIMS

100W CLAIMS

100E CLAIMS

17	17
18	18
19	19
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WESTERN CLAIMS

WESTERN CLAIMS

21	22
23	24
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KINGS MEADOW CLAIMS

13 17 16 15 14 13

17 20 21 22 23 24

WESTERN CLAIMS

KINGS MEADOW CLAIMS

NO	BOOK	PAGE	Serial#	DATE
17	4	71		
18	4	71		
19	4	72		
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12	4	72
13	4	72

JBCARTER

23 S 1 W 8 SE

0-14

REPORT DATE: APR 14, 1987

STATE: UTAH

PCN: LT892PPI

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PAGE NO: 209

MERIDIAN: SALT LAKE

GEOGRAPHIC INDEX

- LEGAL DESCRIPTION - GEO BLM SERIAL CASE
TOWNSHIP RANGE SEC SUBDY CTY DIST NO. TYPE

TOWNSHIP	RANGE	SEC	SUBDY	CTY	DIST	NO.	TYPE	CLAIM NAME/NUMBER	CLAIMANT(S)	LEAD FILE	COUNTY BOOK:PAGE	LOCATION DATE	LATEST ASSMT-YR
23 S	1 W	8 SE	41	5		53584	PL	KING MEADOW #11	BEST WALL GYPSUM CO FLINN E L		11:442	9/12/1960	1986
		SE				53585	PL	KING MEADOW #12	BLACKHAM R D BEST WALL GYPSUM CO FLINN E L		11:442	9/12/1960	1986
		SE				53586	PL	KING MEADOW #15	BLACKHAM R D BEST WALL GYPSUM CO BLACKHAM R D		11:443	9/12/1960	1986
		9 NW				136356	LD	HONEY DEW	FLINN E L BREINHOLT LEO	136356	106:614	11/02/1974	1980
		NE				290176	PL	HONEY DEW	BREINHOLT VERLA BREINHOLT LEO BREINHOLT VERLA BREINHOLT DIANNE	290176	208:142	5/28/1986	0000
		10 NW				290176	PL	HONEY DEW	STREET ELAINE B BREINHOLT LEO BREINHOLT VERLA BREINHOLT DIANNE	290176	208:142	5/28/1986	0000
26 S	1 W	19 SW				120101	PL	CAROLE ANN #17	STREET ELAINE B FULLMER DON W	120085	12:452	9/02/1970	1985
		SE				120102	PL	CAROLE ANN #18	FULLMER ARNOLA B FULLMER DON W	120085	12:452	9/02/1970	1984
		29 SW				120097	PL	CAROLE ANN #13	FULLMER ARNOLA B FULLMER DON W	120085	12:451	9/02/1970	1985
		NW				120098	PL	CAROLE ANN #14	FULLMER ARNOLA B FULLMER DON W	120085	12:451	9/02/1970	1985
		30 NE				120099	PL	CAROLE ANN #15	FULLMER ARNOLA B FULLMER DON W	120085	12:451	9/02/1970	1985
		NW				120100	PL	CAROLE ANN #16	FULLMER ARNOLA B FULLMER DON W	120085	12:452	9/02/1970	1985
27 S	1 W	5 NE	31			120093	PL	CAROLE ANN	FULLMER ARNOLA B FULLMER DON W	120085	"R":455	9/02/1970	1985
		SW				177601	LD	BICENTENIAL	FULLMER ARNOLA B MALLORY RAY	177187	W:456	6/20/1976	1979
		SW				177602	LD	BICENTENIAL #2	MALLORY RUTH MALLORY RAY	177187	W:457	6/20/1976	1979
		SW				177604	LD	BICENTENIAL #4	MALLORY RUTH MALLORY RAY	177187	W:459	6/20/1976	1979
		6 SE				177604	LD	BICENTENIAL #4	MALLORY RUTH MALLORY RAY	177187	W:459	6/20/1976	1979
		SE				177606	LD	BICENTENIAL #6	MALLORY RUTH MALLORY RAY	177187	W:461	6/20/1976	1979
		SE				177608	LD	BICENTENIAL #8	MALLORY RUTH MALLORY RAY	177187	W:463	6/20/1976	1979
		SE				177610	LD	BICENTENIAL #10	MALLORY RUTH MALLORY RAY	177187	W:465	6/20/1976	1979

** DISCLOSURE ** ALL INFORMATION RECEIVED IN THIS OFFICE MAY NOT YET BE LISTED ON THIS REPORT. NAMES AND ADDRESSES ARE ENTERED AS THEY APPEAR ON THE LOCATION NOTICE OR ARE ABBREVIATED TO FIT LIMITED SPACE; THEREFORE THEY MAY NOT APPEAR IN THE EXPECTED SEQUENCE. A BLANK LATEST ASSESSMENT YEAR IN THIS REPORT DOES NOT CONSTITUTE AN ABANDONED CLAIM.

17 S 1 W 13 NW

REPORT DATE: APR 14, 1987

N-14

STATE: UTAH

PCN: LT892PP1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PAGE NO: 208

MERIDIAN: SALT LAKE

GEOGRAPHIC INDEX

- -LEGAL DESCRIPTION- - GEO BLM SERIAL CASE

TWNSHP	RANGE	SEC	SUBDV	CITY	DIST	NO.	TYPE	CLAIM NAME/NUMBER	CLAIMANT(S)	LEAD FILE	COUNTY BOOK:PAGE	LOCATION DATE	LATEST ASSMT-YR
17 S	1 W	13 NW			39	5	LD	CRYSTAL CACITE NO 3	MEMMOTT RALPH C MEMMOTT GRACE L MEMMOTT MERRILL G	139492	210:56	8/20/1947	1981
		NW					LD	CRYSTAL CACITE NO 4	MEMMOTT S MARIL MEMMOTT RALPH C MEMMOTT GRACE L MEMMOTT MERRILL G	139492	210:57	8/20/1947	1981
		SW					LD	CRYSTAL CACITE NO 5	MEMMOTT S MARIL MEMMOTT RALPH C MEMMOTT GRACE L MEMMOTT MERRILL G	139492	210:58	8/20/1947	1981
22 S	1 W	13 SW			41		MS	GABUS #1	GEORGIA-PACIFIC CORP	11:649		9/01/1966	1986
		SW					LD	GABUS #2		11:649		9/01/1966	1986
		SW					LD	GABUS #3		11:650		9/01/1966	1986
		SW					LD	GABUS #4		11:650		9/01/1966	1986
		SW					LD	GABUS #4		11:650		9/01/1966	1986
23 S	1 W	5 NE					PL	WESTERN #14	WESTERN GYPSUM CO	9:471		11/04/1954	1986
		NE					PL	WESTERN #15		9:471		11/04/1954	1986
		SE					PL	WESTERN #16		9:472		11/04/1954	1986
		NE					PL	WESTERN #17		9:472		11/04/1954	1986
		SE					PL	WESTERN #18		9:472		11/04/1954	1986
		SE					PL	WESTERN #19		9:472		11/04/1954	1986
		SE					PL	WESTERN #20		9:480		11/09/1954	1986
		SE					PL	WESTERN #21		9:479		11/09/1954	1986
		7 SW					PL	WESTERN #31	BEST WALL GYPSUM CO	11:415		6/02/1960	1986
		SW					PL	WESTERN #40		11:422		7/15/1960	1986
		SW					PL	WESTERN #41		11:423		7/15/1960	1986
		SE					PL	WESTERN	GEORGIA-PACIFIC CORP	12:269		5/06/1969	1986
		8 SW					PL	KING MEADOW #4	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:434		8/30/1960	1986
		SW					PL	KING MEADOW #5	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:435		8/30/1960	1986
		SW					PL	KING MEADOW #6	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:435		8/30/1960	1986
		SW					PL	KING MEADOW #7	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:435		8/30/1960	1986
		SW					PL	KING MEADOW #8	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:441		9/12/1960	1986
		SE					PL	KING MEADOW #10	BEST WALL GYPSUM CO FLINN E L BLACKHAM R D	11:442		9/12/1960	1986

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35 S 1 W 22

REPORT DATE: APR 14, 1987

STATE: UTAH

MERIDIAN: SALT LAKE

- -LEGAL DESCRIPTION- -

TWNSHP RANGE SEC

35 S 1 W 22

38 S 1 W 17

* DISCLOSURE *
THEY APPEAR
A BLANK LATEST